

CLAIMS

1. A coupling device (20) for restraining belts, particularly for children safety seats for motor-vehicles, comprising a body (21) intended to be connected to at least one belt branch, and a pair of tongue elements (10) intended to be connected each to a respective belt branch, wherein each tongue element (10) includes an attachment portion (10b) for connection with the respective belt branch and a stem portion (10a) arranged to be received and locked in the body (21), said stem portion (10a) forming a catch tooth (10c) for locking the tongue element (10) in the body (21), characterised in that each tongue element (10) comprises a metal insert (12) wholly covered by a plastic or rubber housing or coating.
2. Coupling device according to Claim 1, characterised in that the plastic or rubber coating or housing of each tongue element (10) is overmoulded over the metal insert (12).
3. Coupling device according to Claim 1 or 2, characterised in that the metal insert (12) of each tongue element (10) comprises an essentially flat portion (12a, 12b) having a first part (12b) extending into the attachment portion (10b) and a second part extending (12a) into the stem portion (10a) of the tongue element (10), and a limb (12c) arranged substantially at a right angle with respect to the said first part (12b) for stiffening the catch tooth (10c).
4. Coupling device according to any of the preceding claims, characterised in that the body (21) comprises a latching mechanism including locking means (31) arranged to be moved in a perpendicularly direction to the direction of

insertion/ejection of the stem portions (10a) of the tongue elements (10) into/out of the body (21) from a coupled position, in which the said means engage the catch teeth (10c) of the tongue elements (10) to prevent the latter from being ejected from the body (21), and a released position, in which the said means disengage from the catch tooth (10c), thus allowing the ejection of the elements (10) from the body (21).

5. Coupling device according to Claim 4, characterised in that the latching mechanism further includes a control push-button (25) arranged to be moved parallel to the direction of insertion/ejection of the stem portions (10a) of the tongue elements (10) into/out of the body (21) to control the movement of the locking means (31) in the said released position.

6. Coupling device according to Claim 5, characterised in that the said locking means comprise a locking rod (31) and in that the control push-button (25) comprises at least a ramp-like portion (37) forming a slanted surface (37a) adapted to work together with the locking rod (31) to prevent the latter from moving to the released position.

7. Coupling device according to Claim 6, characterised in that the control push-button (25) forms a projection (33) adapted to retain the locking rod (31) in the coupled position when both the tongue elements (10) are inserted into body (21).

8. Coupling device according to any of Claims 4 to 7, characterised in that the latching mechanism further includes a pair of slider elements (30), each associated to a

respective tongue element (10), wherein the said slider elements (30) can slide parallel to the direction of insertion/ejection of the stem portions (10a) of the tongue elements (10) into/out of the body (21) and are biased by a spring so as to react to the insertion and facilitate the ejection of the tongue elements (10).

9. Coupling device according to Claim 8, when dependent from Claim 6, characterised in that the said slider elements (30) are arranged to prevent the locking rod (31) from moving to the coupled position when both the tongue elements (10) are not inserted into the body (21).

10. Coupling device according to any of Claims 5 to 9, characterised in that it comprises identification means (38) associated to the push-button (25) for showing to the user whether the device is in the coupled position or in the released position.

11. Coupling device according to any of the preceding claims, characterised in that the said tongue elements (10) are provided with connecting members (10d, 10e) for ensuring the alignment of the elements (10) when these are inserted and anchored in the body (21).

12. Coupling device according to Claim 11, characterised in that the said connecting members (10d, 10e) comprise at least a projection (10d) formed by the one tongue element (10) and at least a cavity (10e) provided in the other tongue element (10) to receive the respective projection (10d).